

E-commerce Website for Books-Store

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ABSTRACT

Nowadays, the network plays an import role in people's life. In the process of the improvement of the people's living standard, people's demands of the life's quality and efficiency is more higher, the traditional bookstore's inconvenience gradually emerge, and the online bookstore has gradually be used in public. The online bookstore is a revolution of book industry. The traditional bookstores' operation time, address and space is limited, so the types of books and books to find received a degree of restriction. But the online bookstore broke the management mode of traditional bookstore, as long as you have a computer, you can buy the book anywhere, saving time and effort, shortening the time of book selection link effectively. The online bookstore system based on the principle of provides convenience and service to people.

KEYWORDS: HTML, CSS, JavaScript, Angular, Bootstrap3,4,5, MongoDB/Bootstrap 3,4,5

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E-commerce customer orders Books and their Reference Books

- E Commerce is one of the two modules which was developed as a part of our project.
- It is a platform form where users or other company can buy products such as Book-Store and other references books etc.
- Users can register as sellers if they want to sell products on this platform.
- Registration can be done with email signup.
- There is a search bar, where we can search the desired products.
- After logging in, users can add the products to their cart and checkout.
- There is also a provision for ratings and review for the products bought by the users.
- Customers also can track their products.
- Chat Bot is also designed for allowing customers to interact when they have doubt regarding the products and any issues.
- For front-end (user interface) part, we used HTML, CSS, Bootstrap, Angular

- For back-end part, which include connections between different modules and database connections we used Node JS, MongoDB(Database).
- Used Stripe API for payments.
- Images are stored in the cloud resource (Amazon S3 bucket).
- Used Mlab for database hosting

Technologies used:

Front-end: HTML, CSS, Bootstrap3,4,5, Angular

Back-end: NodeJS, MongoDB, Stripe **Data-Base service:**

HTML: Hyper Text Markup Language is used to create the main structure of a webpage, which outlines the important components in the webpage which we see.

CSS: Cascading Style Sheets is used to define styles of HTML. All the styles, which we see on the webpage can be given credit to CSS.

Bootstrap3,4,5: CSS and Java Script library. It is a free and open source front end library for designing web applications. Bootstrap has some pre-defined

styles, which we can use directly by copying the respective code.

AngularJS: AngularJS is a Java Script based front-end web development framework. It is very useful to create single-page applications. AngularJS was developed by Google.

NodeJS: NodeJS is an open-source and cross-platform Java Script run-time environment which executes JavaScript code server-side.

ExpressJS: It is a web application framework, which is used for NodeJS. ExpressJS can be used for designing web applications and APIs.

MongoDB: MongoDB is an open-source, cross platform database system. It is a No-SQL database and uses Java Script Object Notation -like documents with schemas.

Stripe: Stripe is the payment processing API which we used here.

LIST OF ABBREVIATIONS

Terminology Meaning

ERD	Entity Relationship Diagram
DBD	Database Diagram
DFD	Data Flow Diagram
HTTP	Hyper Text Transfer Protocol
Database	NoSQL Database (MongoDB)
IDE	Integrated Development Environment

INTRODUCTION

An e-commerce website is an information technology method in which traders, businesses/distributors/marketers can sell products/services and the customer can purchase on that website electronically by using the internet on the mobile and computer. On this website, we are displaying the Books and their related reference books and their services

BACKGROUND OF THE STUDY

A bookstore is a retail store that sells books, magazines, and other reading materials. With the rise of e-commerce and digital reading, traditional brick-and-mortar bookstores have faced numerous challenges. To stay competitive, many bookstores have started to leverage technology to offer online sales and personalized recommendations. In this context, the MEAN stack is a popular technology stack for developing web applications.

The MEAN stack is an acronym that stands for MongoDB, Express.js, AngularJS, and Node.js. MongoDB is a NoSQL database that allows for flexible and scalable data storage. Express.js is a web application framework for Node.js that simplifies server-side development. AngularJS is a front-end

framework for building dynamic and responsive user interfaces. Node.js is a JavaScript runtime that enables server-side scripting.

The use of the MEAN stack for building a bookstore application can offer numerous benefits. For example, MongoDB's scalability allows for efficient storage of large amounts of book data, while Express.js simplifies the creation of APIs for accessing this data. AngularJS enables the creation of a dynamic and responsive user interface, while Node.js allows for the efficient handling of server-side logic.

In summary, the use of the MEAN stack for building a bookstore application can offer numerous advantages, such as scalability, flexibility, and efficient data storage and retrieval. The purpose of this study is to explore the feasibility and effectiveness of using the MEAN stack for developing a bookstore application, with a particular focus on its usability, functionality, and performance

STATEMENT OF THE PROBLEM

Traditionally, customers are used to buying the products at the real, in other words, factual company. It needs the customers to show up in the shops in person, and walk around different company shelves, and it also needs the owners of company to stock, exhibit, and transfer the products required by customers. It takes labour, time and space to process these operations.

Furthermore, the spread of the Covid-19 pandemic has caused a lot of changes in our lifestyle, people fearing to get outside their homes, transportation almost shut down and social distancing becoming all the more important. Big to small scale business that relied on the traditional incur a lot of consequence due to the lockdown issues. Some tend to move towards using social media platforms like Facebook to sell their product. However, the social media platforms have been beneficial for marketing purposes alone but leaves the whole task of customer and massive order management via direct messaging (DM), which takes a lot of time to respond to all customers. In addition, everyone tends to use social media, posing a great challenge to differentiate between scammers (fraudsters) and legit sellers.

THE SOLUTION:

Book Store Company Store is an **Online Selling** system provides a solution to reduce and optimize these expenses. Authorized Customers do not need to go to the factual company to choose, and bring the products they need by hands. They simply browse their Personal computers or cell phones to access shops, and evaluate the products description, pictures on the screen to choose products. In addition, the

owners of the company do not need to arrange or exhibit their stocks products. They just input the description, prices of products, and upload their pictures. Simply, both customers and company owners do not need to touch the real products in the whole process of selling, and management. In the end the logistic centre will distribute the products required by customers, or products ordered by shop owners to their locations. The customers are able to track the status of their orders until delivery, after which they can leave a review of the type of service they received. The payment and products' quantity will be saved in database through the data flow. These shopping, management and distribution processes greatly simplify and optimize the retail business.

AIMS AND OBJECTIVES

The main objective of the study is to develop an Website Electric Transformer and their system. The system aims to achieve the following objectives:

- To design an order online Books and their Related reference books.
- To provides a solution to reduce and optimize the expenses of customer order management
- To create an avenue where people can buy for books and their reference books products online.
- To develop a database to store information on books and their reference books services.

SCOPE AND LIMITATION

Every project is done to achieve a set of goals with some conditions keeping in mind that it should be easy to use, feasible and user friendly. As the goal of this project is to develop an online Book-Store and their part brochure system, this system will be designed keeping in mind the conditions (easy to use, feasibility and user friendly) stated above. It may help in effective and efficient order management. In every shot time, the collection will be obvious, simple and sensible. It is very possible to observe the customer potentials and purchase patterns because all the ordering history is store in the database. It is efficient managing all the operations of an online store within a single platform. The project aims to automate the business process of order online books. The proposed project would cover:

Customer Side

- Customer can view/search products without login.
- Customer can also add/remove product to cart without login (if customer try to add same product in cart. It will add only one)
- When customer try to purchase product, then he/she must login to system.
- After creating account and login to system, he/she can place order.

- If customer click on pay button, then their payment will be successful and their order will be placed.
- Customer can check their ordered details by clicking on orders button.
- Customer can see the order status (Pending, Confirmed, Delivered) for each order
- Customer can Download their order invoice for each order
- Customer can send feedback to admin (without login)

Administrator Side

- Admin can provide username, email, password and your admin account will be created.
- After login, there is a dashboard where admin can see how many customers is registered, how many products are there for sale, how many orders placed.
- Admin can add/delete/view/edit the products.
- Admin can view/edit/delete customer details.
- Admin can view/delete orders.
- Admin can change status of order (order is pending, confirmed, out for delivery, delivered)
- Admin can view the feedbacks sent by customers

Additionally, if customer places order and admin deleted that user (fraud detection), then their orders will automatically be deleted. Suppose one (1) customer places four (4) products order and admin deleted two (2) product from website, then that two-product order will also be deleted and other two will be there. Also, if user click on purchase button without having products in their cart, then website will ask to add product in cart first.

On the contrary, designing web applications is characterized by some constraints and limitations. Developers are limited to a small set of graphical widgets for use in presenting a user interface. Web-based applications require high investment in software, as well as maintenance costs for the software and personnel for software administration. In this study, verification of credentials for membership cannot be done. Besides, there is a payment page although just for demo.

Customers are advised to fill in pseudo details (DONT FILL YOUR ORIGINAL CARD DETAILS THERE). By the way, website do not save these details.

➤ RESEARCH METHODOLOGY

The research method used for this project work is quantitative research reviews the current system, provide its description, identifying the discrepancies and eventually giving a suitable solution. Therefore,

the method used in the design and collections of information from various sources are as follows:

- Studying the present system in detail and the organizational style.
- Knowing and understanding the input and output processes of the existing system.
- A qualitative form of interview was conducted in the organization to understand the mode of operation of the old system.

SIGNIFICANCE OF THE STUDY

With the aid of an efficient information system, fashion associations can be able to react quickly by giving out information about changes in the market and latest trends to the public. An online application not only saves time and money, but also minimizes administrative efforts and cost. It provides an avenue to market products to a whole new audience. Here are benefits of having an La BELLE Fashion brochure system;

- Easy advertisement of new products and services
- Saves time on the part of the buyer due to the fact that they can do transactions for any product or make enquiries about any product or services provided by a company anytime and anywhere.
- It creates an avenue for expansion to national and international markets.
- An online fashion brochure system improves the brand image of a company.
- It aids a fashion company in providing better customer service.
- It helps to simplify business processes and make them faster and more efficient.
- **Web based application:** a web-based application is a software package that can be accessed through the web browser. the software and database reside on a central server rather than being installed on the desktop system and is accessed over a network.
- **Web browser:** a web browser is a software application used to enable computer users locate and access web pages.
- **Brochure:** a brochure is an advertising piece mainly used to introduce a company or an organization and inform about products or services to a target audience.
- **E-commerce:** electronic commerce is the buying and selling of goods and services, or the transmission of funds or data, over an electronic network, primarily the internet.
- **Catalogue:** a product catalogue is a file that contains a list of all the products you want to

advertise. Each line of the product catalogue contains a description of each product, including an id, name, category, availability, product URL, image URL and other product attributes.

STATUS OF ONLINE SHOPPING IN PERSENT BUSINESS ENVIOURNMENT

Online buying behaviour is affected by various factors like, economic factors, demographic factors, technical factors, social factors, cultural factors, psychological factors, marketing factors and legislative factors. Customers choose an online-shop mainly based on references, clarity terms of delivery, graphic design and additional services. Problematical customers read discussions on the Internet before they spend their money on-line and when customers are incapable to purchase the product fast and with no trouble they leave online-shop. Kotler, (2003) described Consumer buying method as learning, information-processing and decision-making activity divided in several consequent steps: Problem identification, Information search, Alternatives evaluation, Purchasing decision, Post-purchase behaviour. Euthymia identified the main constituent of the online shopping experience as follows: the functionality of the Web site that includes the elements trade with the site's usability. the emotional elements planned for lowering the customer's hesitation by communicating trust and credibility of the online seller and Web site and the content elements including the aesthetic aspects of the online presentation and the marketing mix. Usability and trust are the issues more regularly found to influence the online consumer's behaviour. Karayiannis, (2) examined that discriminating of potential determinants between web- shoppers and non-shoppers. Free shipping is a great motivator to purchase the products and customers are willing to pay nominal charges for getting their products. While compare the shopping with others shopping, consumers take product price and shipping charges almost equally into deliberation. There are some ways that retailers can do to improve the experience for their online shoppers. The first is to write the expected delivery date of the order, customers are willing to wait for their orders but want to know just how long that force is. Timely coming of product shipment encourages shoppers to recommend an online retailer. Consumers also want to track updates and delivery notifications to understand when their package is incoming. Online shoppers want flexibility in their shipping, mainly the ability to give special delivery instructions or schedule a delivery time. Customers are also wanting to get the address changing option for filling the wrong address when they are purchasing online.

IMPORTANT OF ONLINE SHOPPING

Ling, said that customers can take enjoy online shopping for 24 hour per day. Consumers can purchase any goods and services anytime at everywhere. Online shopping is user friendly compare to in store shopping because consumers can just complete his requirements just with a click of mouse without leaving their home. Online shopping has some advantages like below

- Save the Time of the consumers.
- They can purchase any time anywhere
- They can compare the price with the others retailers very easily.
- Compare the advertising price and actual price
- They can easily track their product
- They can use cash back policy
- They can purchase the product from the foreign marketers.

PROBLEM OF ONLINE SHOPPING

Online shopping problems are great barrier to the online purchase aim of customers. General problems include prospect of having credit card. The obscurity to confirm the reliability of the provide goods and the risk to buy a product that it would not value as much as customer pay for it. Aftersales problems, involved difficulty to change not working product with a new one and products warranty are not assured. Online shopping has various disadvantages:

- The customers can not touch and fell of the products when they want to Purchase.
- Some time delivery time is so much late
- Some time they will pay the shipping charges so why the cost of the product may increase.
- Lack of personal attention by the sellers. More chance to fraud.
- Security of internet banking password and credit card password
- Lack of quality

THE FACTORS WHICH AFFECT ONLINE SHOPPING

There are some factors which affect the online shopping by the Kotler who is a great marketing writer

- Convenience (no traffic, crowds,24 hr. access
- Product Selection
- 3. Delivery Mode

PRIVACY AND SECURITY ISSUES IN ONLINE SHOPPING

Shopping online has never been so easy. With the flourishing numbers of online merchants, people nowadays have various choices to do their shopping.

Big companies such as eBay and amazon.com have introduced many values added features to help the customers to decide what to shop for. With features such as price comparison, product photos and user reviews, consumers can shop easily and smartly without even going to the stores and having such a hard time looking for the products they want. All they have to do are just browse for the product they want in the website and within a few mice clicks they are off. Such simplicity is what makes online shopping appealing for consumers. The question is, why do many people still deny to shop online? Well, for most people, privacy and security issues are their concerns. Hence, here I will discuss customers' perception of privacy and security issues, the reality of such issues and ways to avoid those issues, all based on some trustworthy sources I have found.

To know customers' perception of customer and security issues, I reviewed a scholarly article entitled "Consumer Perceptions of Privacy and Security Risks for Online Shopping" produced in the Journal of Consumer Affairs. In the United States, more than half of the adult population uses the Internet and from that number, approximately half have shopped online (Sefton, qtd. in Miyazaki and Fernandez 28). Previous studies had shown that Internet users as a whole agreed that privacy and security issues are vital for them to shop online (Rohm and Milne, qtd. in Miyazaki and Fernandez, n.d). Most of them regard their personal information as their main concern (U.S. FTC, qtd. in Miyazaki and Fernandez, n.d). In the research conducted by Miyazaki and Fernandez, who are the authors of the articles themselves, privacy and security issues accounted for more than 65 percent of consumers' main concern as oppose to the other 35 for shopping inconveniences and others (Fernandez et al., n.d). They also concluded that more experienced Internet users tend to have more concern regarding privacy issues but less concern on security issues. Nevertheless, consumers still consider both as their main concern for online shopping as suggested in the survey.

Now, after knowing that privacy and security issues are vital for consumers in online shopping, I would like to know the emphasis in the real world. From an article titled "The Myth of Secure E-Shopping" published in PC World, the reality of such issue is revealed. While most consumers trust big and well-established online merchant such as CD Universe, Travelocity, Columbia House and Ikea, these big companies still receive frequent security threats (Kandra, 2001). Joseph McDonnell, a CEO of online security firm IShopSecure even confessed that all online firms must have received threats of some sorts

(Kandra, 2001). He added by saying that hackers could easily infiltrate and get customers personal information online as online shoppers are not anonymous. According to Kandra, experts also discover that security measures taken by online retailers are insufficient. For instance, data encryption only applies in actual transfer of customer data but not in the database which is ironically the most common targets for hackers. Some other sites however, do not even have privacy and security policy posted implying that they do not protect their customers (Hairell, 2011). Kandra posits that this is what happened to eBay when it was hacked hence compromising its customers' credit information. Apart from the retailers themselves, credit card processing firms and third-party sites also receive threats. Creditcards.com once had disclosed that someone had infiltrated its site and posted more than 55000 credit card numbers on the Internet. So, from all these indications, I can see that online shopping is not totally safe.

However, customer rights and security aspects are not just the responsibility of online merchants. To uphold them, the consumers themselves need to act. According to "Ten Things Your Mother Never Told You About Online Shopping" published in Yahoo! Internet Life, to be an ace consumer, online shoppers need to prepare themselves with some basics (Halpin, 2011). As the prominent method of payment is credit card, consumers should be more aware in handling it. They should never disclose their credit information via e-mail. Some of the credit card issuers also have some sorts of protection that consumers should apply for. Apart from that, consumers should limit themselves from releasing unnecessary personal information such as age and income to protect their privacy (Hood & Halpin, 2011). Also, as Todd Richter who is the president of Girl shop (an e-commerce site) had said, consumers should always be aware of the security technology used by merchant sites. Technologies such as Secure Socket Layer (SSL) and VeriSign play vital part in distinguishing one site from another. Nonetheless, consumers should always be alert of the privacy and customer policy in each site they tend to buy from (Halpin, 2011). Lastly, if there are still dissatisfactions, consumers could always report them to consumer-related agencies such as Better Business Bureau or Federal Trade Commission (Halpin, 2011).

Thus, after reviewing these three reliable sources related to the privacy and security issues of online shopping, I can see some interconnections between them. By common sense, anyone who tends to shop online will think twice before they buy anything as to

consider the privacy and security issues related to it. This is proven in my first source ("Consumer Perceptions of Privacy and Security Risks for Online Shopping") through the survey. People are always conscious about their privacy and security. However, this is not the case in the real world. As my second source ("The Myth of Secure E-Shopping") has proposed, even though online merchants have tried their best to beef up the security, threats and attacks still prevail. For this reason, consumer should act fast to protect their privacy when shopping online. My third source ("10 Things Your Mother Never Told You About Online Shopping") explains many ways that consumers could do to enhance the privacy and security aspect apart from what online merchants have done for the same reason. Taking all these contents as a whole, I would say that in any situation, people can still shop online safely provided they understand the reality and take some precautions above all.

Introduction

An e-commerce website is an information technology method in which traders, businesses/distributors/marketers can sell products/services and the customer can purchase on that website electronically by using the internet on the mobile and computer. On this website, we are displaying the electronic transformer Products and their services.

Existing System:

Many customers go for purchase offline to examine the product to hold (books) and hold possession of the product just after payment for the product. In this contemporary world customers' loyalty depends upon the consistent ability to deliver quality, value, and satisfaction: offline buying a sense of immediacy, you get to project possess the item you are used to at the very moment.

If we can search to make list a of items that we could like to try while online purchasing before actually going out, this way we can be more confident in our purchase and not miss out soon something. This can also help us to decide what area (Open InfoTech) to visit.

And plain such an event with the far end.

Justification for the Methodology

This model can be used when the requirements of the complete system are clearly defined and understood, like the case of this project where;

- Major requirements were evidently defined; however, some details evolved with time.
- There was a need to complete the project within a short time schedule.

- A new technology is being used or the resources with needed skill set are not available. I was learning Flask and Django and could iterate from

one technology to another to ensure I effectively implement all the functionalities.

- The project had some high-risk features and goals.

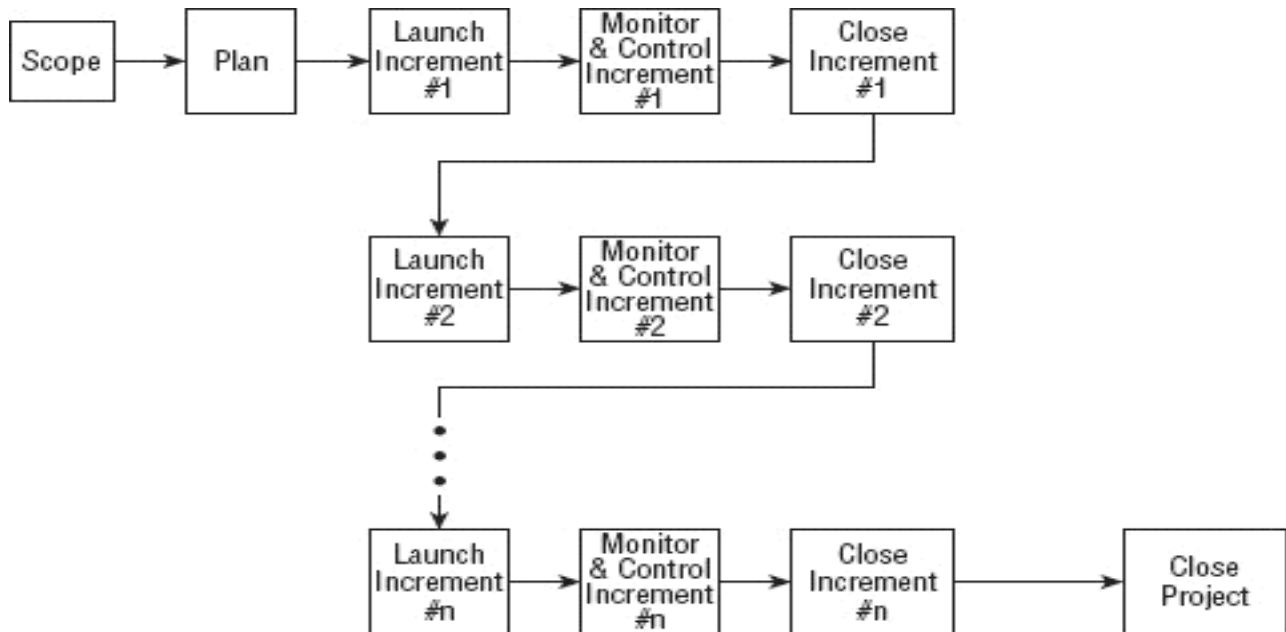


Figure 1: Incremental Project Management Life Cycle

The Incremental model is much better equipped to handle change. Each incremental functionality is verified by the customer and hence the relative risk in managing large and complex projects is substantially reduced. On the downside, there is a possibility of gold plating, wherein the functionalities not really required end up being built into the Product or Deliverable. In a nutshell, Incremental SDLC provides a plethora of advantages including;

- Generates working software quickly and early during the software life cycle.
- COM/O42/16
- This model is more flexible and less costly to change scope and requirements.
- It is easier to test and debug during a smaller iteration.
- In this model customer can respond to each built.
- Lowers initial delivery cost.
- Easier to manage risk because risky pieces are identified and handled during its iteration.

SYSTEM ANALYSIS

Analysis is an important part of any project; if analysis is not done properly then the whole project moves in the wrong direction. It also provides a schedule for proper project work. Analysis task is divided into 3 areas:

- Problem Recognition.
- Feasibility Study.
- Requirement Analysis.

Feasibility Study

Feasibility study of the system is a very important stage during system design. Feasibility study is a test

of a system proposal according to its workability impact on the organization, ability to meet user needs, and effective use of resources. Feasibility study decides whether the system is properly developed or not. There are five types of feasibility as mentioned below:

- Technical Feasibility
- Time Schedule feasibility
- Operational feasibility
- Implementation feasibility
- Economic Feasibility

Technical Feasibility

Technical feasibility corresponds to the determination of whether it is technically feasible to develop the software. Here, those tools are considered, which will be required for developing the project. The tools, which are available, and tools, which will be required, are taken into account. Considering all the above points and aspects, it is observed that the cost incurred in developing this project from a technical perspective would not be too high. Thus, it is feasible for the company as well as for me to develop this system.

Time Feasibility

Time feasibility corresponds to whether sufficient time is available to complete the project.

Parameters considered:

- Schedule of the project.
- Time by which the project has to be completed.
- Reporting period

Considering all the above factors, it was decided that the allotted time of 3 months was sufficient to complete the project.

Operational Feasibility

Operational feasibility corresponds to whether users are aware of interface environment and sufficient resources are available or not.

Parameters considered:

- People with a basic knowledge of computers would be able to use our system very effectively and easily, as the system would have an intuitive **GUI**. The director and employees of La BELLE Fashions have a basic operating knowledge of computers, so understanding the working of the system and using it would be easy from the decision maker's point of view.
- All the relevant necessary resources for implementing and operating this system are already present in office.

Bearing in mind the above factor, it was observed that the cost would be incurred in developing this project from an operational standpoint would be low. Thus, it would be operational feasible for the company.

Implementation Feasibility

Implementation Feasibility is about basic infrastructure required to develop the system. Considering all below points, it is feasible to develop system.

Factors considered:

- All the minimum infrastructure facility required like PC, books, technical manuals are provided.
- Proper guidance is provided.
- All necessary data and files are provided.

Economic Feasibility

Economic Feasibility is about total cost incurred for the system. The software resource requirement of the proposed system is Django and SQLite for functional and backend development and HTML, CSS, JS for the frontend UI.

Requirements Analysis and Specification

A complete understanding of software requirement is essential to the success of a web- development effort. No matter how well designed or well coded, a poorly analysed and specific program will disappoint user and bring grief to the developers.

The requirement analysis task is process of discovery, refinement, modified and specification. The software scope, initially established by the system engineer and refined during project planning, is refined in detail. Models of the required data, information and control flow, and operational behaviour are created. Alternative solutions are analysed and various project element.

Currently who want to buy some shoes or any clothing type they have to go to the shop and buy them this is

very tedious for customer therefore we upload this site on internet. This web-site should be developed with an aim to simplify shopping process and keeping transparency and flexibility in performing each operation.

Requirements Gathering

Also known as data collection. Data Collection is an important aspect of any type of research study. Inaccurate data collection can impact the results of a study and ultimately lead to invalid results. The methods used to gather the projects requirements involves Quantitative research to review the existing systems in the market.

Data Collection Methods

This study used quantitative techniques like online survey and questionnaire. Qualitative data collection methods play an important role in impact evaluation by providing information useful to understand the processes behind observed results and assess changes in people's perceptions of their well-being. Furthermore, qualitative methods can be used to improve the quality of survey- based quantitative evaluations by helping generate evaluation hypothesis; strengthening the design of survey questionnaires and expanding or clarifying quantitative evaluation findings. These methods are characterized by the following attributes:

- They tend to be open-ended and have less structured protocols
- They rely more heavily on interactive interviews; respondents may be interviewed several times to follow up on a particular issue, clarify concepts or check the reliability of data
- They use triangulation to increase the credibility of their findings
- Generally, their findings are not generalizable to any specific population, rather each case study produces a single piece of evidence that can be used to seek general patterns among different studies of the same issue

Existing written and visual materials were assessed to find important data and information towards the development of the system. Information about appointment managements, patient's management were collected. During data collection, the investigation found out how the current system operates, not only that but also tried out which problems are faced and how best they can be settled.

Requirement analysis and specification may appear to be relatively simple task, but appearances are deceiving. Communication content is very high, chances for misinterpretations or misinformation abound. Ambiguity is probable. The dilemma that confronts a software engineer may best be understood

by repeating the statement of an anonymous customer: “I know you believe you’re understood what you think I said, but I am not sure you realize that what you heard is not what I meant”.

Requirements

The requirements form the proposed system was categorized into functional and non- functional requirements.

Functional Requirements

The following is the desired functionality of the new system. The proposed project would cover:

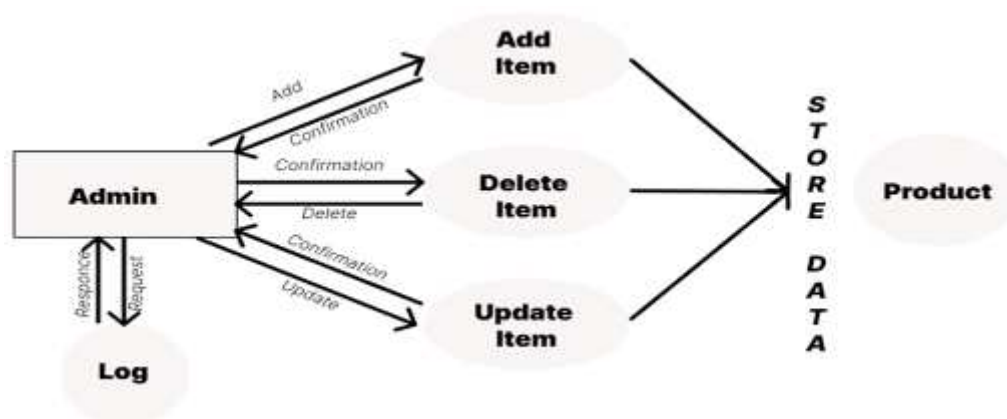
Customer Module

- Customer can view/search products without login.
- Customer can also add/remove product to cart without login (if customer try to add same product in cart. It will add only one)
- When customer try to purchase product, then he/she must login to system.
- After creating account and login to system, he/she can place order.
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- Customer can send feedback to admin (without login)

Admin Module

- Admin can provide username, email, password and your admin account will be created.
- After login, there is a dashboard where admin can see how many customers is registered, how many products are there for sale, how many orders placed.
- Admin can add/delete/view/edit the products.
- Admin can view/edit/delete customer details.
- Admin can view/delete orders.

System Architecture:



- Admin can change status of order (order is pending, confirmed, out for delivery, delivered)
- Admin can view the feedbacks sent by customers

Non-functional Requirements

It specifies the quality attribute of a software system. They judge the software system based on Responsiveness, Usability, Security, Portability and other non-functional standards that are critical to the success of the software system.

- **Availability:** The system should remain operational in any day and any place.
- **Accuracy:** There is a need to optimize the system to ensure more accurate results and calculations.
- **Usability:** The system should provide a User-friendly user interface and tooltips to enhance itself and be effectively responsive.
- **Secure:** The system must be able to provide security against any external injections by using a layered security system. Implementation of user login functionalities also ensures the system is secure from unauthorized persons.
- **Performance of the system:** Response time is very good for given piece of work. The system will support multi user environment.
- **Reliability of the system:** The system will be highly reliable and it generates all the updates information in correct order. Data validation and verification is done at every stage of activity. System recovery will also be speed.

Disadvantages of the Existing System:

- Need for Internet Access

Advantages of Existing System:

- Easy way to find the Electrical Transformer
- Save time and effort to find the Electrical Transformer and their parts
- It helps to increase the productivity of organizations.
- It is also helpful to organizations to provide better services to their customers.

- **System Specifications:** This section describes the hardware components and software requirements needed for effective and efficient running of the system

Table: 1 Hardware Requirements:

SL	Hardware	Minimum System Requirement
01	Processor	2.4 GHz Processor speed
02	Memory	2 GB RA
03	Disk Space	500 GB

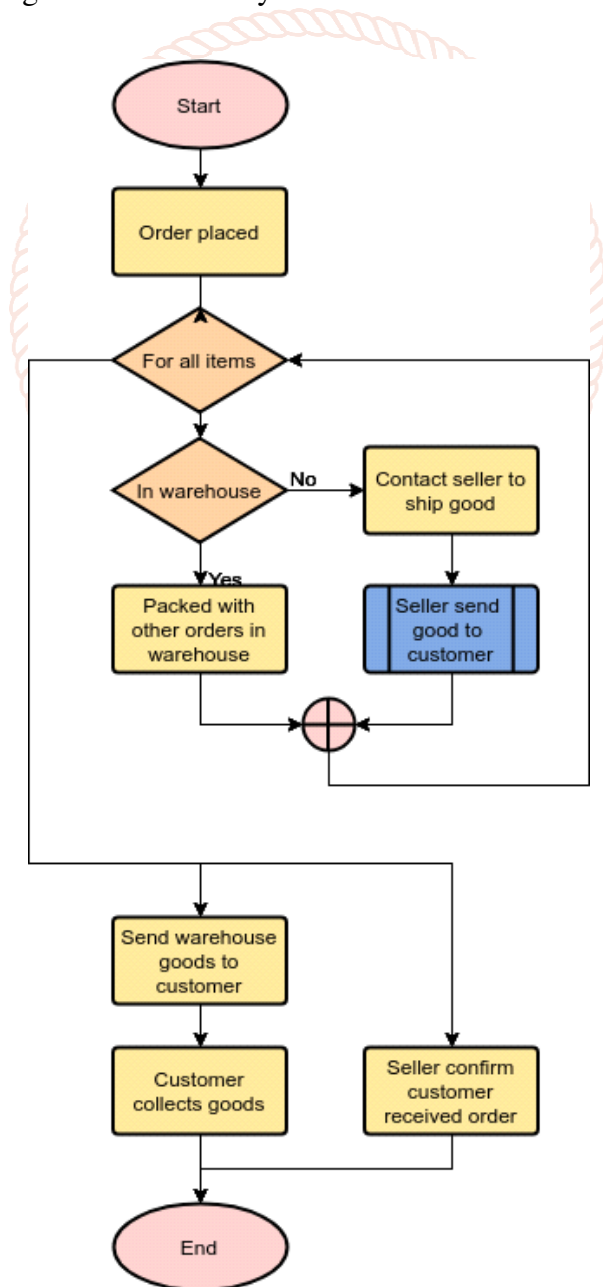
Table: 2 Software Requirements

SL	Software	Minimum System Requirement
01	Operating System	Windows 8, Windows 10 or MAC Os 10.8,10.9, or 10.11, LINUX
02	Database Management System	MongoDB
03	Runtime Environment	PyCharm or Visual Studio Code

SYSTEM DESIGN

The section describes the system study, analysis, design strengths and weaknesses of the current system, Context level diagrams, Entity Relationship Diagram, Architectural design. After interpretation of the data, tables were drawn and process of data determined to guide the researcher of the implementation stage of the project. The tools, which were employed during this methodology stage, where mainly tables, Data Flow Diagrams and Entity Relationship Diagrams. The design ensures that only allows authorized users to access the systems information.

Process Flow

**Figure 8: Process Flow Diagram**

Data Flow Diagrams



Figure 9: Data Flow Diagram

Flow Chart

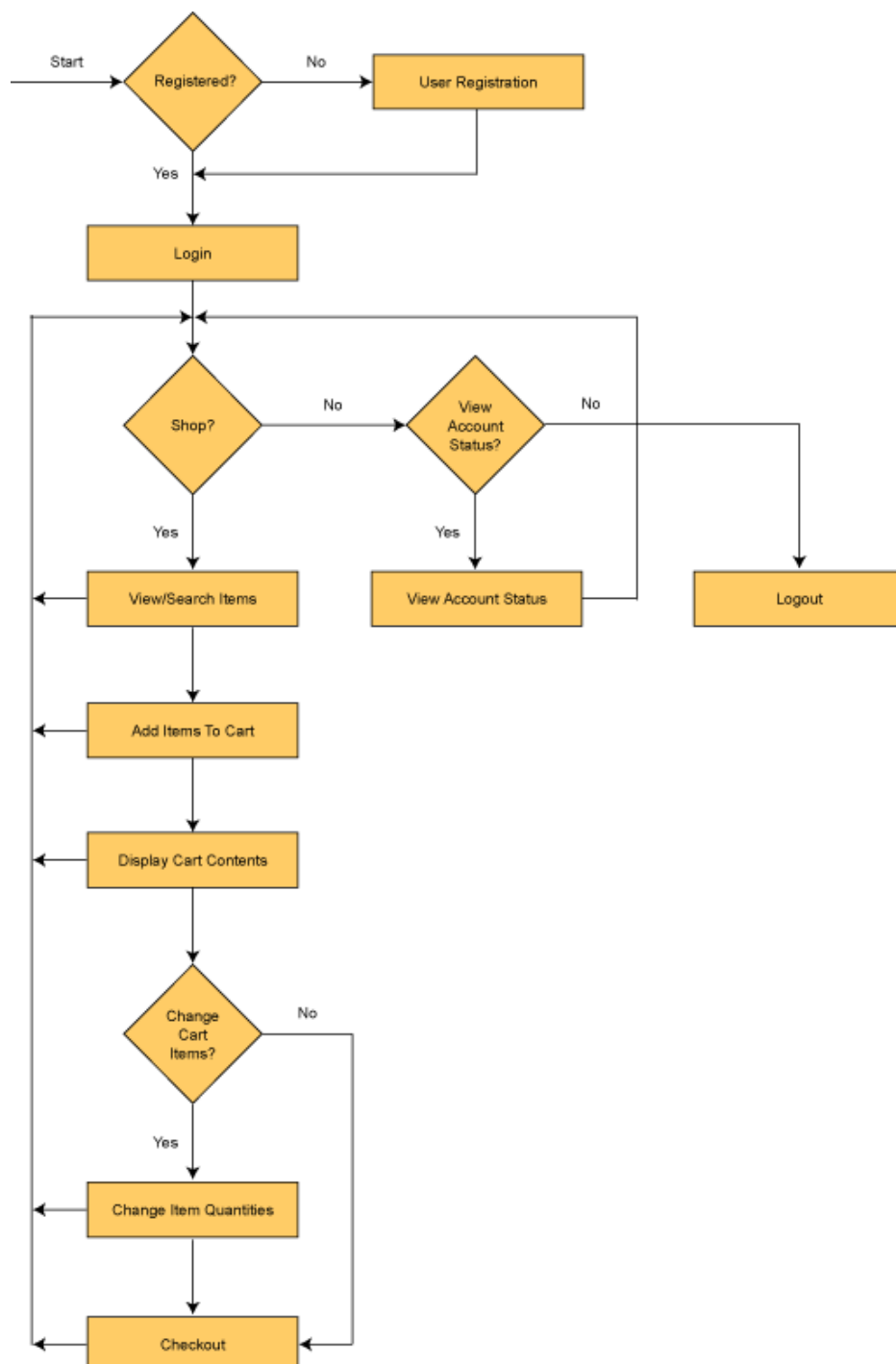


Figure 10: Customer shopping flow chat

UML Diagram

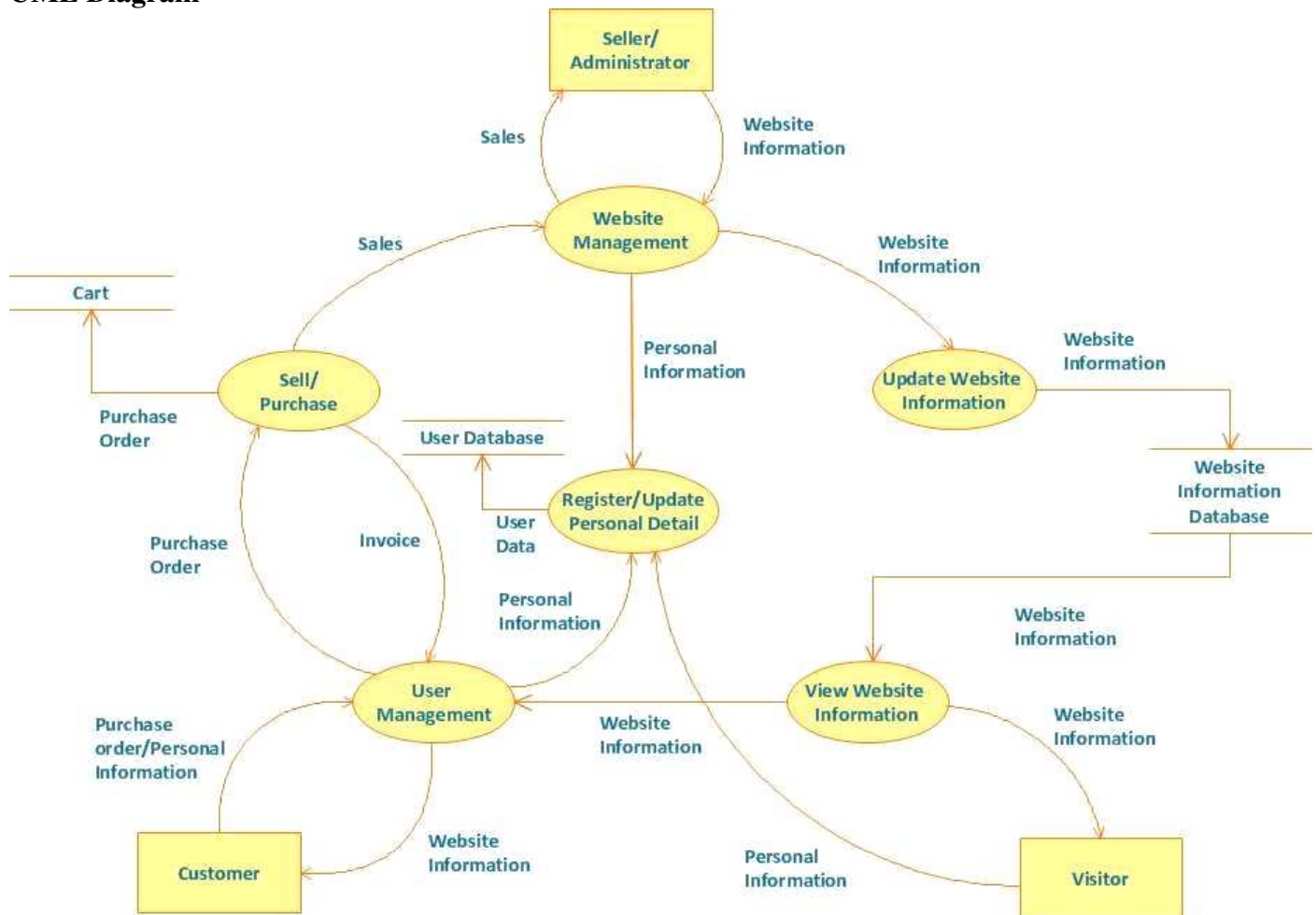


Figure 11: UML Diagram

Data Design

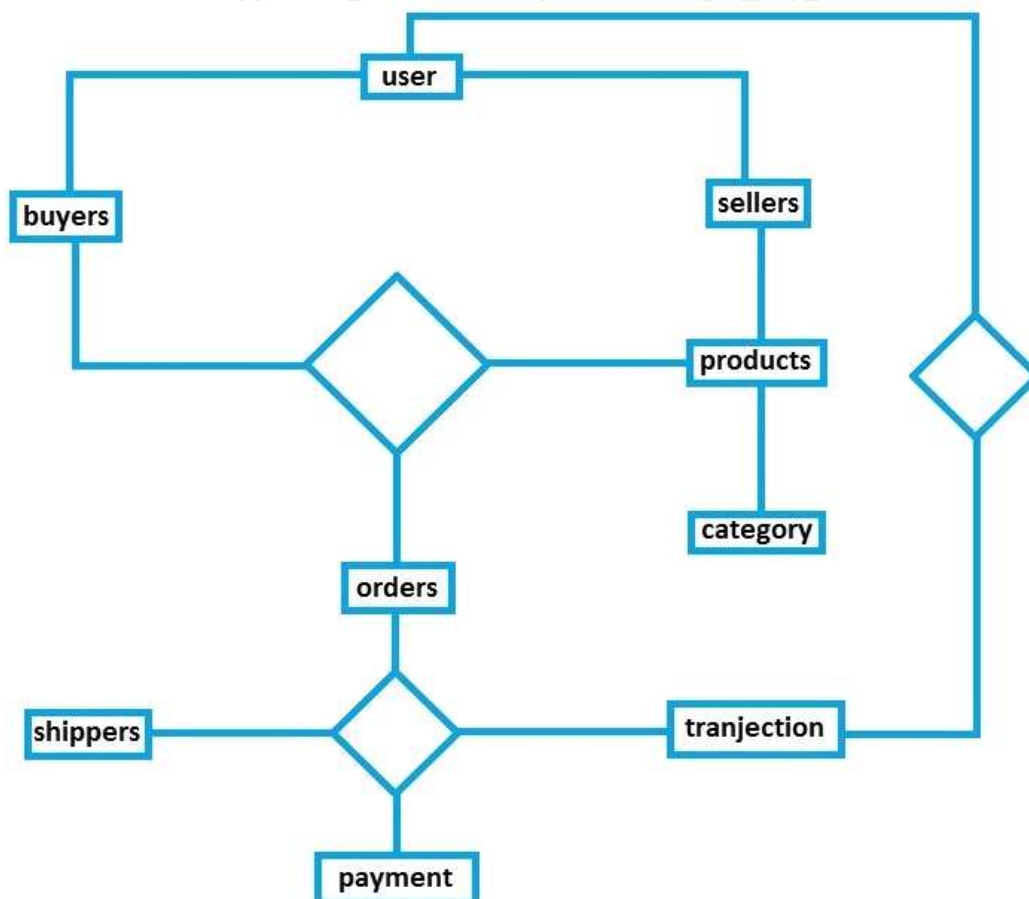


Figure 12: Data Diagram

Data Relationships

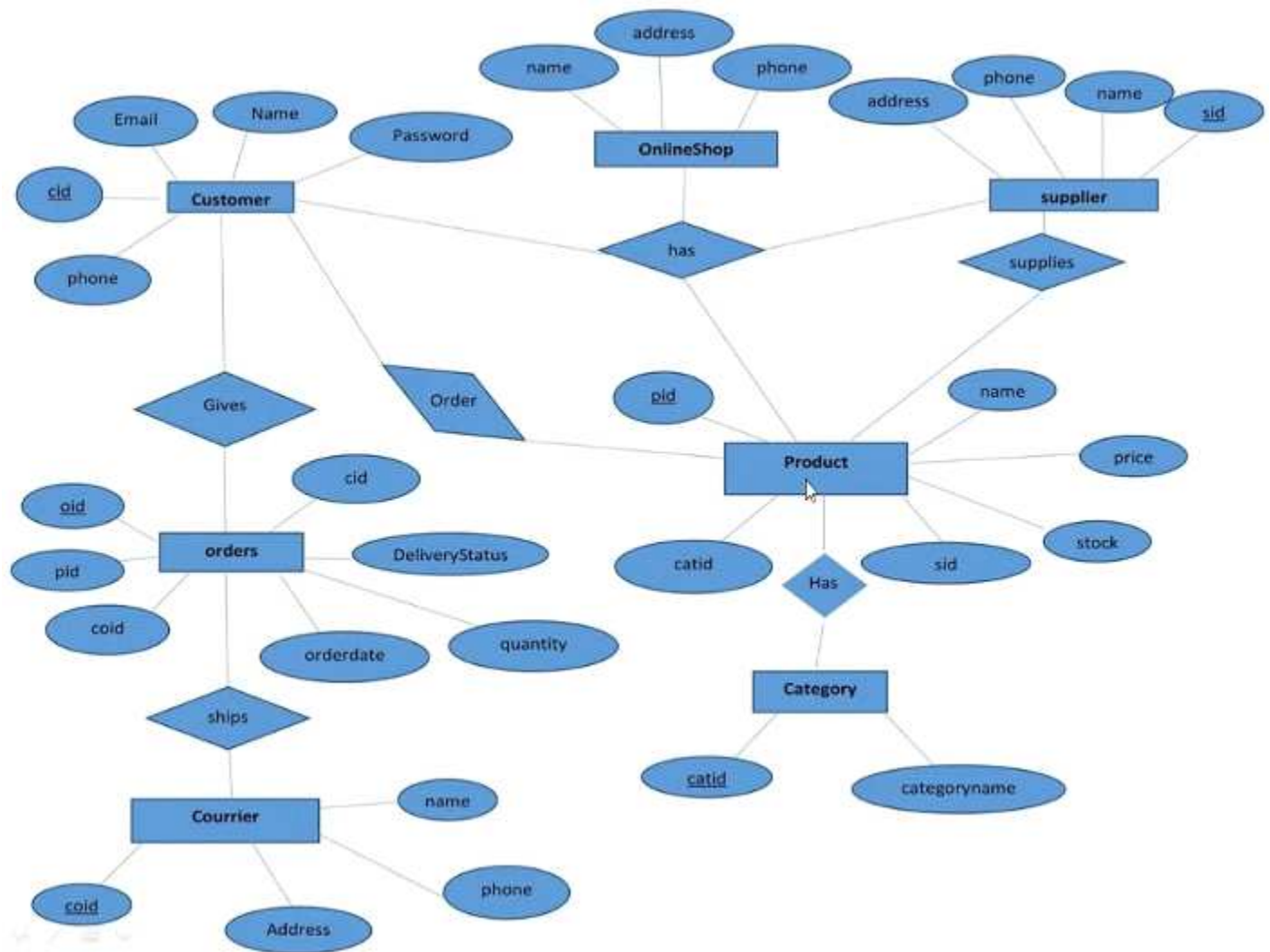


Figure 13: Data Relationship Diagrams

The screenshot displays the user interface of an e-commerce application. At the top, there is a navigation bar with the "ECommerce" logo, a search bar, and links for "Categories", "Accounts", and "Cart". The main content area features a "Login" form with the following elements:

- Title**: "Login"
- Email Field**: Contains the text "chandraharsha111@gmail.com".
- Password Field**: Contains four dots (masked password).
- Login Button**: A blue button labeled "Login".

At the bottom right of the page, there is a user profile section with the text "Hi there..!!" and a small circular avatar icon.

User Authentication Login:

ECommerce

Categories

CHANDRA JUPALLI

Cart

Registration successful!

Registration

Name

CHANDRA JUPALLI

Email

chandraharsha111@gmail.com

Password

Confirm Password

☒ Register as Seller

Register

Hi there, !!

ECommerce

computer

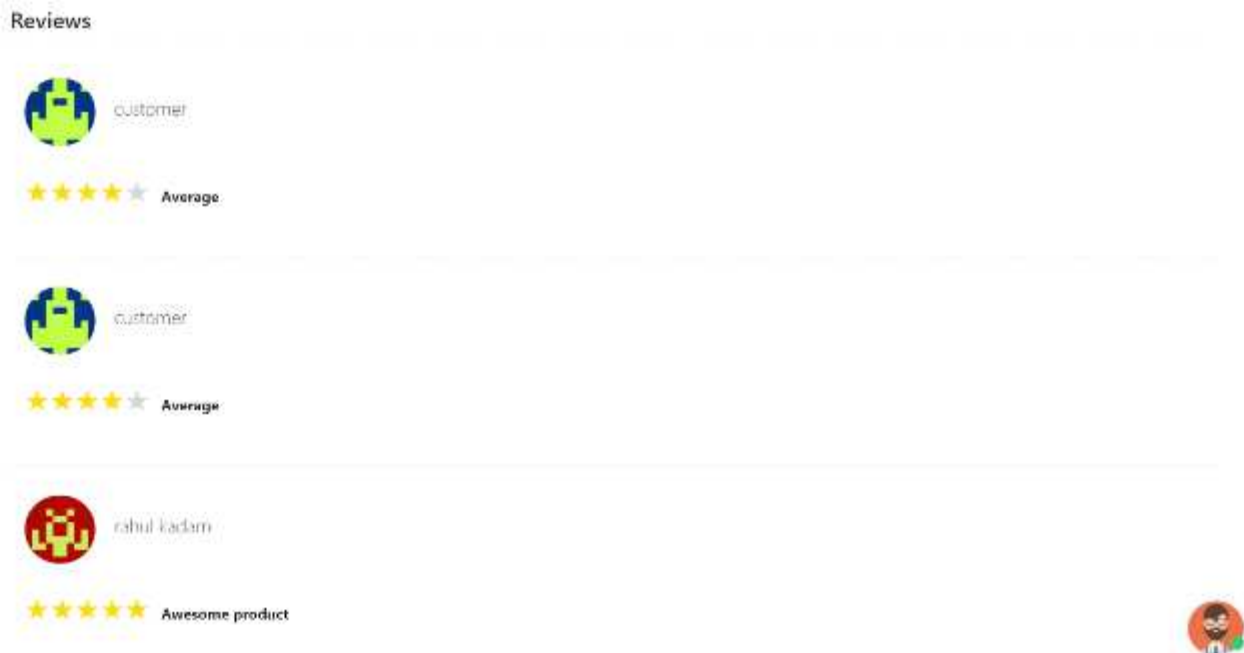
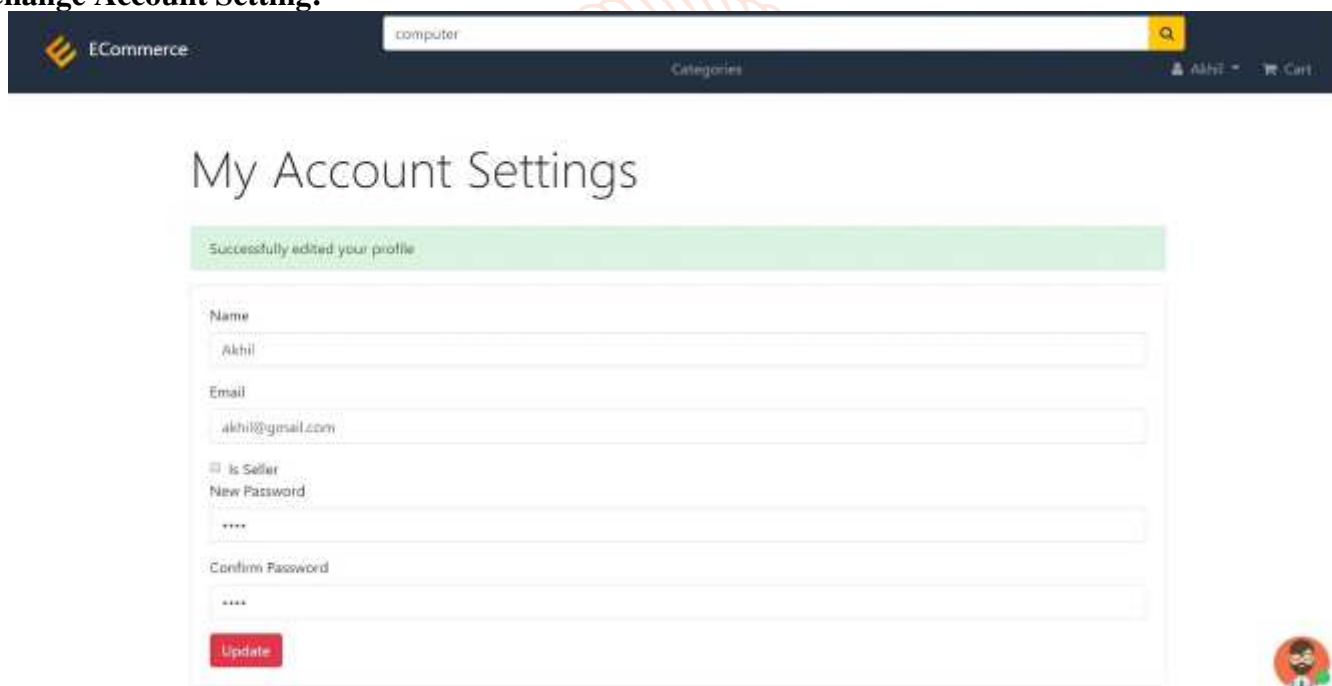
Categories

Akhil

Cart

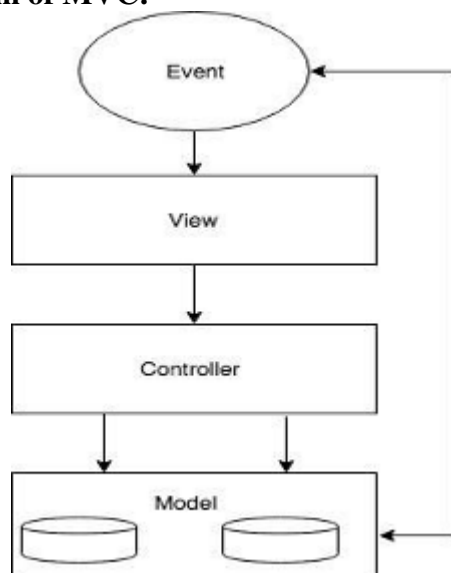
Purchase Successful.

Cart is Empty

Review Page:**Change Account Setting:****Pages:**

Registration	This procedure allows the customers to sign in before making an order. Managers of the website is created by system admin.
Product	This module contains the details of all products in the store.
Price	Manages Prices of products
Shopping	Manages the basic flow of orders. It's the procedure by which a client places an order
Payment	Customer makes payment at this stage. However, this system does not have a real payment system.
Search	Customers are able to search for specific product through this procedure
Layout	Customers view products from the homepage. They can Mouse over to display product description.
Reporting	The customers are able to view and download their invoices. The system also provides room form customer feedback
Administration	The system admin / business managers access the admin dashboard that allows them to add products, view and confirm orders.

Diagram of MVC:



Structure of the Project Files

- **Models** are basically the blueprints of the database we are using and hence contain the information regarding attributes and the fields etc of the database.
- **Views** is a crucial one, it contains all the Views (usually as classes). Views.py can be considered as a file that interacts with the client. Views are a user interface for what we see when we render a Django Web application.

- **URLs** Just like the project urls.py file, this file handles all the URLs of our web application.

Conclusion:

A developing country may well attempt to be modernized if it introduces e-commerce effectively and efficiently. It will improve its output and lead to its competitive advantage. Information.

The factors which will significantly contribute to the success of the E-Commerce industry and focused upon should be the consistency of transaction steps, consistency of Web site design, replacement guarantee, E-Commerce services, consistency of promotions, consistency of in-stock indications, consistency of product variety, location-based services, multiple payment options, right content, shipment option, the legal requirement of generating invoices for online transactions, quick Service, T & C should be clear & realistic, the product quality should be same as shown on the portal.

Start using the right structure for your proposals and see how it will change your business performance.

Reference:

- [1] This Project is made for Open Info-tech from Goodwill Powertech Equipment pvt. Ltd.